

MECAR - Bug #11711

Large bus errors are sometimes seen during the super cycle after the time line has been changed.

02/12/2016 12:32 PM - Kevin Martin

Status:	Closed	Start date:	02/12/2016
Priority:	High	Due date:	
Assignee:	Kevin Martin	% Done:	100%
Category:		Estimated time:	4.00 hours
Target version:		Spent time:	4.00 hours
Description			
Large bus errors are sometimes seen during the super cycle after the time line has been changed. These bus error are sometimes large enough to cause beam aborts.			

History

#1 - 02/12/2016 05:13 PM - Kevin Martin

The problem may be caused be MECAR not having enough time to prepare. The G:TLGSTP device only guarantees at least 2 seconds notice of a new Timeline before the end of the super cycle. Since MECAR only polls the G:TLGSTP device at 1Hz that mean sometimes MECAR only has 1 second to prepare. I belive that sometimes this is not enough time. So occationally MECAR doesn't finish setting up for the new timeline before it comes. This causes the new timeline to play while MECAR is still using the old super cycle learning. This equals BIG errors.

#2 - 02/15/2016 10:41 AM - Kevin Martin

- Status changed from New to Assigned

- % Done changed from 0 to 50

The changes I am going to make to fix this problem are from both directions. First, I am going to have MECAR poll the G:TLGSTP device at 2Hz rather than 1Hz. This will give MECAR an extra 0.5 second in the worst case to do it's processing. Secondly, I am going to treat the Super Cycle buffers separately from the rest of the buffers and have a new set pre-zeroed and ready to go before MEACR even finds out that a new Time Line is coming. This will greatly reducing the processing time needed by MECAR after it finds out that a new Time Line is coming.

These two things combined should solve the problem.

#3 - 06/13/2016 03:04 PM - Kevin Martin

I have deployed these changes and they seem to be working.

#4 - 06/13/2016 03:06 PM - Kevin Martin

- % Done changed from 50 to 100

#5 - 06/13/2016 03:06 PM - Kevin Martin

- Status changed from Assigned to Closed